

election. Claim 1, the only independent claim under consideration, has been amended to define still more clearly what Applicant regards as his invention, in terms which distinguish over the art of record. The title has been further amended. Claims 27-35 have been added to assure Applicant of a full measure of protection of the scope to which he deems himself entitled.

A substitute specification is in preparation and will be submitted shortly.

Claims 1 and 2 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 4,032,313 (Tokuhara).

Independent Claim 1 is directed to a production apparatus for a crystal. The apparatus has a crucible divided in multi-stages, to be used for refining a material in a process for refining the material by adding a scavenger in the material. One important feature of an apparatus constructed according to this claim, is that a plurality of storing spaces for storing the material can be made by dividing the crucible into a plurality of portions or stages. An additional advantage of this structure is that the storing spaces are naturally small in comparison with a storing space of a crucible which is not divided. As a result, the

scavenger which is added to the material spreads everywhere within the small storing space, and as a result impurities can be efficiently removed from the material.

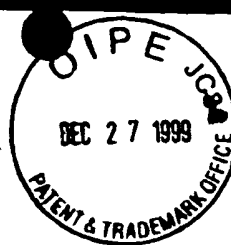
*Tokuhara* relates to a method for producing an optical fiber by using crucibles. Applicant believes that using this optical fiber producing method, it would be difficult to obtain as high a degree of uniformity as would be desirable, in the resulting optical fiber, unless the levels of molten glasses which are melting in the crucibles are maintained constant during the production of the optical fiber by using the apparatus in which a plurality of crucibles 1, 2, and 3 having overflow passages 7, 8, and 9 are arranged in superimposed relation one upon the other (see Fig. 1).

Applicant notes, however, that *Tokuhara* relates to the production of optical fibers, and does not teach or suggest the technology for refining the material. In addition, Applicant submits that nothing in *Tokuhara* would teach or suggest that a scavenger spreads everywhere through the entire material. In the first place there is no description or suggestion about adding a scavenger for the purpose of refining the material.

Indeed, in Applicant's view, *Tokuhara* is in a different technical field from that to which the present invention relates. Moreover, that patent is concerned with solving quite a different problem from that solved by the present invention. Finally, Applicant believes strongly that nothing in *Tokuhara*, including the structure shown in Figs. 1 and 2, and the alternative embodiments of Figs. 3 and 4, would teach or suggest a multi-stage crucible as recited in Claim 1.

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as a reference against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims under consideration in this application are each dependent from Claim 1, and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration or reconsideration, as the case may be, of the patentability of each on its own merits is respectfully requested.



In view of the foregoing amendments and remarks,  
Applicant respectfully requests favorable reconsideration and  
early passage to issue of the present application.

Applicant's undersigned attorney may be reached in  
our New York office by telephone at (212) 218-2100. All  
correspondence should continue to be directed to our below  
listed address.

Respectfully submitted,

  
Attorney for Applicant

Registration No. 29,491

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3801  
Facsimile: (212) 218-2200  
/pap

RECEIVED  
JAN 11 1999  
TC 1700 MAIL ROOM